DOCUMENT RESUME

ED 251 412 SP 025 403

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TITLE Self-Control Behavior of Drinking Drivers beyond the Context of a Behavioral Self-Control Program.
PUB DATE [82]
NOTE 13p.
PUB TYPE Reports - Research/Technical (143)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Alcohol Education; *Behavior Modification; Cognitive Restructuring; *Drinking; *Program Effectiveness; *Self Control; *Traffic Safety
IDENTIFIERS *Drinking Drivers

ABSTRACT

This paper reports on the post hoc analysis of specific types of self-control behaviors being employed by drinking drivers who were exposed to a behavioral self-control training program. The underlying assumption of this study is that the success of health promotion and intervention programs most probably depends on the development of greater self-control. A random sample of individuals who voluntarily attended a free alcohol education program for drinking drivers completed a Transfer of Self-Control Behavior Questionnaire two weeks after completing the program. Although nearly all subjects reportedly continued to practice a variety of self-control behaviors after the conclusion of the alcohol education program, many more self-control behaviors were not being employed. This study found that behaviors such as self-reinforcement, which are believed to be an essential component of "self-control," were largely undeveloped. It may be that self-control procedures require a greater period of supervised practice before thay are assimilated into an individual's behavior. (Author/JD)

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ED251412

Self-Control Behavior of Drinking Drivers Beyond the Context of a Behavioral Self-Control Program

This paper reports the post hoc analysis of specific types of self-control behaviors being employed by drinking drivers who were exposed to a behavioral self-control training program. The underlying assumption of this study is that the success of health promotion and intervention programs most probably depends on the development of greater self-control. A random sample of individuals who voluntarily accepted to attend a free alcohol education program for drinking drivers completed a Transfer of Self-Control Behavior Questionnaire two weeks after the completion of the program. Although nearly all subjects reportedly continued to practice a variety of self-control behaviors after the conclusion of the alcohol education program, many more self-control behaviors were not being employed. This study found that such behaviors as self-reinforcement, which are believed to be an essential component of "self-control", were largely undeveloped. It may be that self-control procedures require a greater period of supervised practice before they are assimilated into an individuals behavior.

SP 025 403

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For ages people have sought to control themselves as well as their environment. Historically, the term "self-control" has been linked to the concepts of "will" and "will power". Aristotle, Kant, Mill, Locke, Milton, Shakespeare and others have speculated about the nature of human existence and have cited the virtue of "will". Recently the concept of "self-control" has undergone scientific scrutiny, particularly by social learning theorists and behavior therapists. Self-control is therefore viewed as a behavior learned in much the same manner as other behaviors.

Goldfried and Merbaum[1] have defined self-control as "a process through which an individual becomes the principle agent in guiding, directing, and regulating those features of his own behavior that might eventually lead to desired positive consequences" (p. 11). Generally, self-control refers to the regulation of those behaviors with conflicting consequences. Self-control procedures have therefore been applied primarily to behaviors which offer immediate positive reinforcing consequences and delayed aversive consequences (e.g., smoking, overeating, deviant sexual behavior, alcohol and drug abuse, etc.).

The promotion of healthy behavior is of increasing concern to health professionals. The success of health promotion and intervention programs probably depends on the eventual development of self-control. Although treatment and educational programs aimed at teaching responsible drinking behaviors are often concerned with the development of greater self-control, few studies of these programs have reported the specific types of self-control behaviors being used by subjects after the conclusion of the program. This study is a post hoc analysis of the specific types of

self-control behaviors being employed by drinking drivers who were exposed to a behavioral self-control training program.

Methods

The subjects in this study were individuals who voluntarily accepted to attend a free alcohol education program for drinking drivers. From a pool of individuals, eight subjects were randomly assigned to an experimental behavioral self-control training condition. The behavioral self-control condition followed the content and organization of Miller and Munoz's[2] self-help manual, including training in goal setting, self-monitoring, rate control, self-reinforcement, and functional analysis of drinking. The experimental condition consisted of four two-and-one-half hour small group sessions held over a five week period.

Subjects in the experimental condition reported a mean age of 22.37 years and 12.37 mean years of education. Seven of the eight subjects were females. Subjects reported consuming 19.90 alcoholic drinks* per week and a mean score on the Michigan Alcoholism Screening Test (MAST)[3] of 6.37. The experimental subjects also reported a mean of 4.75 drinking-and-driving incidents per month and no driving while intoxicated (DWI) arrests or convictions. Participants reported experiencing a mean of 2.37 alcohol-related life problems. Six of the eight subjects reported experiencing at least one alcohol related problem and all eight subjects were classified as heavy** drinkers.

A Transfer of Self-Control Behavior Questionnaire was completed by the experimental subjects two weeks after the completion of the program. This instrument contained 14 categorical response items (i.e., yes, no,

maybe) concerning subjects' use of specific drinking-related self-control behaviors. The Transfer of Self-Control Behavior Questionnaire permitted the collection of descriptive data identifying the percentage of experimental subjects continuing to practice various categories of self-control behavior after the conclusion of the alcohol education program. Spearman Rank-Order Correlation Coefficients were performed to determine intercorrelations between the number of self-control behaviors employed and various alcohol-related behavior variables.

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*One drink is defined as: one 10 oz. glass of 5% beer; one 4 oz. glass of 12% wine; one 2.5 oz. glass of 20% sherry or fortified wine; 1.25 oz. of 40% distilled spirits; or 1 oz. of 50% distilled spirits.

**Heavy drinkers were those individuals who exceeded 20 drinks per week or a blood alcohol concentration of 0.07 percent or both, as reported by any data source.

Results

Seven of the eight subjects reported practicing self-control behaviors after the alcohol education program. The number of self-control behaviors employed (yes responses) ranged from zero to seven with a mean of 4.12 behaviors (S.D. = 2.23).

Self-control behaviors employed after the conclusion of the Alcohol Education program are shown in Figure 1. Item one showed that less than half of the participants (3 subjects) continued to set drinking goals (limits) for themselves after the conclusion of the program. Item two indicated that six of the eight subjects continued to self-monitor their drinking patterns. Items three through eight, which delt with rate control procedures, indicated that the majority of subjects were not continuing to practice rate control behaviors. In particular, item three showed that no subjects had selected beverages because of a lower alcohol concentration. One exception to this trend was item eight which identified that seven of the eight subjects continued to refuse unwanted drinks. Items nine and ten concerned self-reinforcement and self-punishment behaviors. Most subjects indicated that they had not continued either of these behaviors. In particular, item nine showed that no subjects continued to reward (reinforce) themselves for progress toward self-control. Items eleven through thirteen delt with altering antecedents to heavy drinking (e.g., places, people, the time and day of drinking). Again, the majority of subjects showed that they had not continued these procedures. Finally, item fourteen showed that four of the subjects had deliberately altered factors (antecedents) that could influence their drinking-and-driving.

1. set drinking goals (limits) for yourself?

   3 yes 5 no 0 maybe

2. self-monitored your drinking patterns?

   6 yes 2 no 0 maybe

3. selected beverages because of a lower alcohol concentration?

   0 yes 6 no 2 maybe

4. deliberately taken smaller sips of an alcoholic beverage?

   2 yes 5 no 1 maybe

5. deliberately spaced your sips more widely?

   1 yes 6 no 1 maybe

6. observed a minimum time limit before starting another drink?

   2 yes 5 no 1 maybe

7. interspersed nonalcoholic beverages when drinking?

   2 yes 6 no 0 maybe

8. refused unwanted drinks?

   7 yes 1 no 0 maybe

9. rewarded (reinforced) yourself for progress toward self-control?

   0 yes 7 no 1 maybe

10. punished yourself for failure at self-control?

    1 yes 6 no 1 maybe

11. deliberately drank at places where you tend to control your drinking?

    1 yes 5 no 2 maybe

12. deliberately drank with people with whom you tend to control your drinking?

    3 yes 4 no 1 maybe

13. deliberately altered other factors (antecedents) that can influence your drinking such as the time and day you drink, activities related to drinking, etc?

    1 yes 6 no 1 maybe

14. deliberately altered factors (antecedents) that can influence your drinking and driving?

4 yes 3 no 1 maybe

Total Responses 33 yes 67 no 12 maybe

Figure 1. Self-Control Behaviors Employed after the Conclusion of the Alcohol Education Program.

Subjects reported continuing a total of 33 self-control behaviors (yes responses), or 29 percent of a possible 112 behaviors (i.e., all eight subjects reporting all fourteen self-control behaviors). A more liberal estimate of the number of self-control behaviors employed would include subjects who reported they may have been continuing self-control behaviors (yes plus maybe responses). These data showed that 45 self-control behaviors, or 40 percent of the total behaviors possible, were being continued by the subjects.

Spearman Rank-Order Correlations were conducted to determine inter-correlations between the number of self-control behaviors employed and various alcohol-related behavior variables. Non-significant correlations were found between the number of self-control behaviors continued (yes plus maybe responses) and alcohol consumption ($r = .548$, $p > .05$), and self-control behaviors and peak blood alcohol concentrations ($r = .540$, $p > .05$). A moderate, significant correlation was found between the number of self-control behaviors employed and the number of alcohol-related problems ($r = .633$, $p < .05$).

Conclusions

Although nearly all subjects reportedly continued to practice a variety of self-control behaviors after the conclusion of the alcohol education program, many more self-control behaviors were not being employed. Certain types of self-control behaviors were continued more than others. The majority of subjects reported to be continuing self-monitoring of their drinking. This may have resulted from the fact that self-monitoring was requested of the subjects throughout the program, and

was therefore the single most practiced self-control procedure during the program. The majority of subjects also continued to refuse unwanted drinks, which was one of various behaviors dealing with rate control. However, most subjects were not continuing to use other rate control behaviors such as spacing sips and interspersing nonalcoholic with alcoholic drinks. It is possible that the self-control practice of refusing unwanted drinks was highly employed because of its relative ease, or because subjects may have been familiar with this behavior and had practiced it prior to the onset of the alcohol education program. Four of the subjects also reportedly continued to alter antecedents which may have influenced their drinking-and-driving. Few subjects, however, reported to continue deliberately altering antecedents that would influence their drinking generally. It could be that subjects were not interested in, nor motivated toward, the alteration of their general drinking patterns. Rather, subjects may have been concerned only with the specific instance of drinking-and-driving. This seems a logical deduction since all subjects volunteered for an alcohol education program for "drinking drivers". It was also interesting to note that although alcohol consumption and peak blood alcohol concentration (highest point reached) were not significantly correlated with the number of self-control behaviors employed, the number of alcohol-related problems was significantly correlated with self-control behaviors. It is possible that the individuals experiencing greater numbers of alcohol-related life problems were more concerned with controlling their drinking than were the subjects with lessor numbers of problems.

This study's results identify the need to emphasize the development of self-control behaviors in future programs aimed at teaching responsible drinking. In particular, this study found that such behaviors as self-reinforcement, which are believed to be an essential component of "self-control",[4] were largely undeveloped. It may be that self-control procedures require a greater period of supervised practice before they are assimilated into an individuals behavior. Because it was not determined how many of the specific self-control behaviors may have been employed by subjects prior to the implementation of the program, rather than learned during the program, future studies should collect and analyze data on various self-control behaviors in diverse experimental settings both prior to, during and over extended follow-up time periods.

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